

CLAIMS

What is claimed is:

1 1. An integrated circuit, comprising:
2 at least one DC to DC converter for receiving a supply voltage and producing at
3 least one intermediate voltage, at least one of said intermediate voltages having a
4 greater voltage level than said supply voltage; and
5 processing circuitry for receiving at least one time-varying input signal and
6 modifying a parameter of said time-varying signal to produce a modified time-varying
7 signal.

1 2. The integrated circuit of claim 1, wherein said processing circuitry further
2 receives said intermediate voltage having a greater voltage level than said supply
3 voltage.

1 3. The integrated circuit of claim 1, wherein said parameter is selected from
2 the group consisting of a voltage level and a frequency.

1 4. The integrated circuit of claim 1, wherein said modification is selected from
2 the group consisting of increasing said parameter and decreasing said parameter.

1 5. The integrated circuit of claim 1, wherein said processing circuitry
2 comprises digital circuitry.

1 6. The integrated circuit of claim 1, wherein said processing circuitry
2 comprises analog circuitry.

1 7. The integrated circuit of claim 1, wherein said processing circuitry
2 comprises analog and digital circuitry.

1 8. The integrated circuit of claim 1, wherein said time-varying input signal is a
2 digital signal.

1 9. The integrated circuit of claim 1, wherein said time-varying input signal is
2 an analog signal.

1 10. The integrated circuit of claim 1, wherein said parameter of said time-
2 varying signal that is modified by said processing circuitry is programmable.

1 11. The integrated circuit of claim 1, wherein said processing circuitry
2 comprises an input buffer and an output buffer.

1 12. The integrated circuit of claim 1, further comprising at least one passive
2 element for providing programmability to said at least one intermediate voltage.

1 13. The integrated circuit of claim 12, wherein said at least one passive
2 element is a peripheral passive element.

1 14. The integrated circuit of claim 1, wherein said DC to DC converter is
2 switched capacitor based.

1 15. The integrated circuit of claim 1, wherein said integrated circuit further
2 comprises a plurality of outputs, wherein an output voltage level a first of said outputs is
3 greater than an output voltage level of a second of said outputs.

1 16. The integrated circuit of claim 1, wherein said output voltage of said first
2 output is a DC voltage greater than said supply voltage.

1 17. A circuit board, comprising:
2 a plurality of integrated circuits disposed on said board, said plurality of
3 integrated circuits requiring a plurality of voltage levels and signals for operation; and
4 an integrated power supply circuit disposed on said board, said integrated power
5 supply circuit comprising:
6 at least one DC to DC converter for receiving a supply voltage and
7 producing at least one intermediate voltage, at least one of said intermediate
8 voltages having a greater voltage level than said supply voltage;
9 processing circuitry for receiving at least one time-varying input signal and
10 modifying a parameter of said time-varying signal to produce a modified time-
11 varying signal; and

12 a plurality of outputs, wherein an output voltage level a first of said outputs
13 is greater than an output voltage level of a second of said outputs.

1 18. The circuit board of claim 17, wherein said processing circuitry further
2 receives said intermediate voltage having a greater voltage level than said supply
3 voltage.

1 19. The circuit board of claim 17, wherein said parameter is selected from the
2 group consisting of a voltage level and a frequency.

1 20. The circuit board of claim 17, wherein said modification is selected from
2 the group consisting of increasing said parameter and decreasing said parameter.

1 21. The circuit board of claim 17, wherein said processing circuitry comprises
2 digital circuitry.

1 22. The circuit board of claim 17, wherein said processing circuitry comprises
2 analog circuitry.

1 23. The circuit board of claim 17, wherein said processing circuitry comprises
2 analog and digital circuitry.

1 24. The circuit board of claim 17, wherein said time-varying input signal is a
2 digital signal.

1 25. The circuit board of claim 17, wherein said time-varying input signal is an
2 analog signal.

1 26. The circuit board of claim 17, wherein said parameter of said time-varying
2 signal that is modified by said processing circuitry is programmable.

1 27. The circuit board of claim 17, wherein said processing circuitry comprises
2 an input buffer and an output buffer.

1 28. The circuit board of claim 17, further comprising at least one passive
2 element for providing programmability to said at least one intermediate voltage.

1 29. The circuit board of claim 28, wherein said at least one passive element is
2 a peripheral passive element.

1 30. The circuit board of claim 17, wherein said DC to DC converter is switched
2 capacitor based.

1 31. The circuit board of claim 17, wherein said output voltage of said first
2 output is a DC voltage greater than said supply voltage.